CLAIMS

1. A varnish comprising an insulation resin, a curing agent, a flame retardant and an organic solvent, wherein said flame retardant comprises flame retardant particles surface treated with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organosilicon compound and a dispersant having a carboxyl group.

2. The varnish according to claim 1, wherein said surface treated flame retardant particles have a primary particle average major axis of 0.01 to 5 μm and an average aspect ratio of up to 5 and contain up to 10% by number of particles having a major axis of greater than 10 μm.

3. The varnish according to claim 1, wherein said surface treated flame retardant particles are dispersed as particles having a secondary particle diameter of up to 30 μm in the varnish.

4. The varnish according to claim 1, wherein said surface treated flame retardant particles are obtained by surface treatment of a flame retardant by contact with a surface treatment agent in an organic solvent, wherein said flame retardant is wet milled as needed.

5. The varnish according to claim 1, wherein said flame retardant is a halogen-free flame retardant that is dispersible as solid particles in an organic solvent.

6. The varnish according to claim 1, wherein said phosphorus compound soluble in an organic solvent is an alkyl acid phosphate with an alkyl group having at least 8 carbon atoms.

7. The varnish according to claim 1, wherein said organosilicon compound is an organopolysiloxane having a functional group selected from the group consisting of an amino group, an epoxy group, a carboxyl group, an acrylate group, a methacrylate group, a hydroxyl group, a mercapto group, a vinyl group, and a halogen atom.

8. The varnish according to claim 1, wherein said dispersant having a carboxyl group is a high-molecular dispersant having a structure in which the carboxyl group is bonded to a high-molecular compound selected from the group consisting of a polyester resin, an acrylic resin, a polyurethane resin, a polyether resin, and an alkyd resin.

9. The varnish according to claim 1, wherein said insulation resin is at least one insulation resin selected from the group consisting of an epoxy resin, a maleimide resin, a (meth)acrylic resin, a diallyl phthalate resin, a triazine resin, an alicyclic olefin polymer, an aromatic

polyether polymer, a benzocyclobutene polymer, a cyanate ester polymer, a liquid crystal polymer, and a polyimide resin.

10. The varnish according to claim 9, wherein said alicyclic olefin polymer is an alicyclic olefin polymer having a polar group selected from the group consisting of a hydroxyl group, a carboxyl group, an alkoxyl group, an epoxy group, a glycidyl group, an oxycarbonyl group, a carbonyl group, an amino group, an ester group, or a carboxylic anhydride group.

11. The varnish according to claim 1, which contains, per 100 parts by weight of the insulation resin, 1 to 100 parts by weight of the curing agent and 0.1 to 80 parts by weight of the surface treated flame retardant particles, and further contains an organic solvent in an amount enough to uniformly disperse or dissolve said components therein.

12. A formed material, which is obtained by applying and drying a varnish on a substrate, wherein said varnish comprises (a) an insulation resin, (b) a curing agent, (c) flame retardant particles surface treated with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organosilicon compound and a dispersant having a carboxyl group, and (d) an organic solvent.

13. The formed material according to claim 12, which is a film or sheet.

14. An electrical insulation film, which is obtained by curing the film or sheet according to claim 13.

15. A multilayer structure, wherein an electrical insulation layer obtained by curing the formed material according to claim 12 is formed on a substrate having a conductor circuit layer.

16. The multilayer structure according to claim 15, wherein said electrical insulation layer is an electrical insulation film formed by thermocompression of the film or sheet according to claim 13 on a substrate having a conductor circuit layer.

17. A process for preparing a surface treated flame retardant particle, wherein a flame retardant is brought in contact with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organosilicon compound and a dispersant having a carboxyl group in an organic solvent for surface treatment, wherein said flame retardant is wet milled as needed.

18. A flame retardant slurry, wherein flame retardant

particles surface treated with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organosilicon compound and a dispersant having a carboxyl group are dispersed in an organic solvent.

19. The flame retardant slurry according to claim 18, wherein said surface treated flame retardant particles are dispersed as particles having a primary particle average major axis of 0.01 to 5 μm and an average aspect ratio of up to 5 and containing up to 10% by number of particles having a major axis of greater than 10 μm.

20. A varnish preparation process comprising a step (1) of preparing surface treated flame retardant particles by bringing a flame retardant in contact with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organosilicon compound and a dispersant having a carboxyl group in an organic solvent for surface treatment, wherein said flame retardant is wet milled as needed, and a step (2) of mixing together a flame retardant slurry in which the surface treated flame retardant particles are dispersed in an organic solvent, an insulation resin and a curing agent, optionally followed by adding an organic solvent.